Cooperative Yellowtail Tagging Annual Meeting

January 14, 2004 Woods Hole, MA
Summary of Discussions

Participants:
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Jason Amaru, F/V Joanne-A III
Sarah Babson-Pike, National Marine Fisheries Service Port Agent
Ed Barrett, F/V Phoenix and F/V Sirius
John Boardman, Massachusetts Marine Fisheries
Steve Cadrin, Northeast Fisheries Science Center
Jonathan Duquette, Northeast Fisheries Science Center
Steve Follett, F/V Heather Lynn
Chris Glass, Manomet Center
Dave Goethel, F/V Ellen Diane
John Hoey, Northeast Fisheries Science Center
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Rob Johnston, Northeast Fisheries Science Center
Darren Jones, School for Marine Science and Technology
Nathan Keith, Northeast Fisheries Science Center
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Ross Kessler, School for Marine Science and Technology
Jeremy King, Massachusetts Marine Fisheries
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Eric May, University of Maryland
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Anthony Morales, National Marine Fisheries Service Port Agent
Gregg Morris, Manomet Center
Josh Moser, Northeast Fisheries Science Center
Rodney Rountree, School for Marine Science and Technology
Fred Serchuk, Northeast Fisheries Science Center
Gary Shepherd, Northeast Fisheries Science Center
Heath Stone, Canada Department of Fisheries and Oceans
April Valliere, Rhode Island Department of Fish and Wildlife
Azure Westwood, Northeast Fisheries Science Center
Chris Zanni, National Marine Fisheries Service Port Agent

Presentations

Frank Almeida, the acting Deputy Director of the Northeast Fisheries Center, welcomed the participants to the Woods Hole lab, and participants introduced themselves. Azure Westwood summarized the meeting plan, which involved a morning of presentations with discussions and an afternoon of planning for the 2004 field season.

Steve Cadrin reviewed the background and goals of the project: estimate mortality movement among areas and growth. He also explained how the experimental design, releasing tags in proportion to local abundance, allows for population estimates of movement, mortality and growth. Azure described the field protocol and the NEFSC cooperative tagging trips off Hampton NH, on Georges Bank, off Chatham, off Provincetown and off coastal Maine. Dave Martens described his tagging trip in the Great South Channel. Larry Alade presented his work on model development, showing that tags released in a geographic design can effectively estimate mortality and movement. Heath Stone described Canadian tagging efforts. Azure presented progress in the outreach program.

Major Discussion Issues

There were many thoughtful comments offered and interesting ideas discussed at the meeting. The following is a brief description of the decisions made at the meeting and associated discussions.

Tagging Juvenile Fish - A concern was raised that movements of juveniles are being ignored by the current experimental design and tagging protocol, because only marketable-sized fish are being tagged. According to IBS results, few sub-legal sized yellowtail were caught in the spring (none less than 19cm), but a large number of ~24cm fish were caught in the fall. This raises questions about where juvenile fish are distributed in spring.

The group recognized this as a new question that is not addressed by the original project objectives. Everyone agreed that the issue was important and worth refining the project goals and designs. It was also noted that tagging juveniles would benefit the growth objectives of the study. The group agreed that juveniles should be tagged, with both disc tags and data tags, but not at the expense of meeting the goal of tagging marketable-sized fish in proportion to local abundance. For the goal of estimating fully-recruited fishing mortality, sublegal-sized fish may have to be excluded from the analysis, because the model is currently designed for fish that fully-selected by legal fishing gear.

In discussing the allocation of 2004 tagging days, participants felt that more tags per day can be released in southern New England-Mid Atlantic, because the few tags per day released in November-December, 2003 were limited by skate and dogfish bycatch, weather and seasonal availability. Therefore, a solution was proposed in which ALL yellowtail caught in SNE-MA tagging trips (i.e., juveniles and adults) be tagged in 2004. Given the low proportion of marketable fish that need to be tagged in the area to achieve proportionality (10% of the coastwide resource and 10% of total tag releases), the group felt that we can easily extend the tagging effort to sub-legal fish and still meet the

targeted number of marketable releases. It was noted that the IBS data should be used to locate concentrations of juveniles and adults for tagging trips.

Furthermore, participants felt that juveniles should be tagged in other areas (Georges Bank and Cape Cod-Gulf of Maine) when possible, without reducing the number of marketable fish tagged. For example, for small tows there is plenty of time to tag all yellowtail (marketable and sub-legal sizes) without sacrificing any sea time. We may need to determine the minimum size fish that can be successfully tagged with discs and data tags (size at maturity is approximately 25cm, or 10 inches). Therefore, **the tagging protocol will be revised to tag sublegal and marketable yellowtail in SNE-MA, all marketable yellowtail in GB and CC-GOM, and sublegal yellowtail in GB and CC-GOM as time allows.**

Distribution of 2004 Tagging Effort

After an evaluation of 2003 release sites, the experimental design, and model results from historical data, the group decided to **maintain proportionality of coastwide tag releases relative to regional distribution of the yellowtail resource**:

stat area	yellowtail resource	2003 days	2003 releases	2003 tags/day	2004 days	2004 projected releases	total releases	% releases
513	7%	3	5	*	7	1457	1462	7%
514	13%	10	2081	208	4	832	2913	14%
521	10%	10	2089	209	1	209	2298	11%
522	3%	0.5	723	1446	0.5	723	1446	7%
525	12%	1.5	131	87	20	1747	1878	9%
561	1%	0.5	428	856	0.5	428	856	4%
562	43%	6	2929	488	10	4882	7811	38%
526	3%	2	117	59	6	351	468	2%
537	4%	3	419	140	2	279	698	3%
613	3%	1	208	208	2	416	624	3%
	100%	37.5	9130		53	11324	20454	100%

* approximated using observed tags/day in 514

The group felt that more yellowtail can be tagged off Maine (area 513) if tagging is done in May, when there is less fixed gear and yellowtail are distributed more offshore than later in the year. The group also suggested notifying fixed gear fishermen so they may move their gear, or try capturing yellowtail with flatfish gillnets or other fixed gear.

Several fishermen identified areas not sampled in 2003. For example, the Massachusetts Bays area (514) should release yellowtail on the northern part of Stellwagen Bank as well as in western Cape Cod Bay and Massachusetts Bay. The best time to tag in these areas may be during the rolling closure (April and May).

Another fishing ground that was not sampled was south of closed area 2, where a fall fishery has developed. Fishermen also noted that the western part of the Nantucket Lightship closure (area 537) should be sampled.

Fishing Gear

Fishermen discussed the relative merits of collecting fish for tagging with various fishing gear: large-mesh, small-mesh, square and diamond mesh, flatfish gillnets, etc. It became obvious that the objective of catching a moderate number of yellowtail in good condition without much bycatch requires different gear in different areas at different times of year. Therefore, the group decided that each contracted skipper is the best judge of appropriate gear, and flexibility should not only be allowed, but permitted with letters of authorization or scientific collection permits. Therefore, **Scientific Collection Permits for 2004 will include the provision for small mesh.**

Tag Retention and Induced Mortality

The group was concerned that tag-induced mortality should be considered with a complimentary holding experiment. The development of methods for such an experiment could also be used to address wider bycatch issues in northeast fisheries. Such an **experiment may be proposed as a development project by one or more partners in the project.**

The group was also concerned that the 't-bar' tag used for the Canadian study may have a lower retention rate than disc tags. Therefore, it was agreed that **500 disc tags will be given to Canada DFO to double tag with discs and 't-bar' tags in the Canadian "yellowtail hole" in 2004 using the cooperative tagging protocol.**

Contracting Process

Based on a review of various offshore collaborative studies, the cost of offshore trips was discussed and the group decided that **$4,000 per day will be the cost advertised in the request for bids.**

Several suggestions for improvements to the contracting process were discussed, such as including a picture of the **deck plan** to help evaluate bids, a **pre-contracting conference** will all potential bidders, and **web support** for filing bids. The group agreed that the requests for bids should have an **April 1 deadline for bids**.

Outreach

Several suggestions were also offered to promote the project in the fishing and scientific communities, such as more **pictures** and an option for providing **comments** on the website. A **"Frequently Asked Questions"** section with a response to "Will this be used against me?" should be added to the website. Also, outreach for the Candaian tagging effort should be included on the website. **Additional port visits** were suggested for Stonington CT, Montauk NY, Shinnecock NY, and Yarmouth NS. **Plastic rulers** with outreach information may help provide a method for measuring recaptured fish. A **lottery drawing at Fish Expo** (Providence Set 30-Oct 2) was suggested. Several participants though another **general mailing** to permit holders and more **press releases** would also help

Data Analysis

The group was concerned about the effect of closed areas and seasons on model results. It was suggested that patterns of fishing effort should be included in the model development.

These and many more ideas were discussed and evaluated at the meeting. Participants offered their perspectives and opinions on many aspects of the study. There was consensus that a **third year of funding** should be proposed to continue the study. The hosts of the meeting thank all who attended and all who supported and helped the project during 2003.